A Case of Herpes Zoster with Generalized Varicelliform Eruption

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We report a case of herpes zoster with generalized varicelliform eruption. A 56-year-old male presented with rice-sized erythematous grouped ruptured or crusted vesicles with a band-like distribution on the left chest and back and generalized rice-to-pea-sized erythematous vesicles on his whole body. Histologic examination revealed ballooning degeneration and multi-nucleated giant cells in the epidermis and leukocytoclastic vasculitis in the dermis.

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Herpes zoster is characterized by grouped vesicular lesions on an erythematous base and distributed over the sensory dermatome. In 2 to 10 percent of unselected patients with localized zoster, most of whom are old or debilitated persons, especially those who have immunologic defects such as lymphoproliferative diseases, or receive immunosuppressive therapy, there occurs widespread cutaneous lesions and a clinical syndrome with many of the characteristics of varicella. The purpose of this article is to examine the rare and peculiar finding of common herpes zoster even though there is a relatively high percent rate of occurrence in foreign reports and patients without any underlying disease of immune compromised state.

REPORT OF A CASE

A 56-year-old man visited us due to generalized vesicular eruption on his trunk and face. He noted the onset of painful vesicular eruption on the left side of his chest and back ten days prior to coming to the hospital. On the two following days, generalized vesicular eruption appeared. Past history and family history were unremarkable. On physical examination, generalized rice-to-pea-sized erythematous vesicles were noted on his whole body and rice-sized erythematous grouped ruptured or crusted vesicles with a band-like distribution on his left chest and back (Fig. 1). The laboratory tests including a complete blood count, erythrocyte sedimentation rate, electrolyte, liver function test, PT, PTT, CRP, ASO, RF, VDRL, anti-HSV antibody, anti-VZV antibody, urinalysis, chest roentgenogram and EKG were within normal limits or negative.

A skin biopsy was performed on a vesicular lesion on his trunk and it showed ballooning degeneration and multi-nucleated giant cells in the epidermis (Fig. 2) and leukocytoclastic vasculitis in the dermis.

The patient was treated with 250 mg of acyclovir intravenously every 8 hours, analgesics for the pain, and topical measure with zovirax oint and 0.3% alum solution. On the night of admission 6cc of immune serum globulin was given intramuscularly. The next morning he was given the same dose again. Crusting which had begun on the fifth day of admission continued to appear, progressing down the body in the order of appearance of the original vesicular process. He was discharged on the sixth day following his admission, but he still remained in some pain of a moderate nature.
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Fig. 1. Generalized vesicles were noted on his face and trunk and localized ruptured or crusted vesicles were noted on his left chest.

Fig. 2. Mutinucleated giant cells (arrow) are admixed with PMLs in the epidermis (H & E stain × 100).

DISCUSSION

Herpes zoster is a localized disease characterized by vesicular skin lesions which are nearly always unilateral, do not cross the midline, and are generally limited to the area of skin innervated by a single sensory ganglion. However, in about 2 to 10 percent of patients with localized zoster, generalized varicelliform eruption may occur elsewhere on the body due to hematogenous dissemination of the virus from the usual sites of multiplication in the skin or nerve tissue. Both normal persons and patients with underlying diseases may develop disseminated zoster, but there is an increase in its incidence in old or debilitated persons, especially patients who have immunologic defects such as malignant lymphoma, lymphocytic leukemia, AIDS, multiple myeloma, or receiving immunosuppressive therapy.

New lesions appear in the generalized disease usually starting about a week after the onset of the localized eruption. Generalization continues over a 3- to 5-day period. The specific factors which predispose some people to the dissemination of zoster are not yet known. It is possible that defects in cell-mediated and humoral immunity in immunosuppressive patients may predispose them to the dissemination of zoster. Mazur and Dolin have shown that low levels of serum antibody to herpes
zoster antigen is a highly significant risk factor in predicting dissemination of the disease. Gallagher and Merigan observed that lymphocyte transformation and interferon response to the varicellazoster virus were markedly depressed in patients with unusually prolonged zoster associated with immunosuppressive therapy. Stevens and Merigan have shown that patients with disseminated zoster have a delayed vesicular interferon response, some have a delayed complement-fixing antibody response, and a few have a delay in both. They suggest that local interferon production, possibly mediated by sensitized lymphocyte, and humoral antibodies act to prevent or shorten the dissemination of an initially local disease.

Management of disseminated cutaneous zoster should first be directed towards increasing the immune responses. Consideration should also be given to treatment with systemic antiviral agents. Human leukocyte interferon and human gammaglobulin also appear to have a favorable effect.

REFERENCES